CURRENT FISHERIES STATISTICS NO. 7502

# Industrial Fishery Products, Annual Summary 1977

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Source of data:–Since 1921, the National Marine Fisheries Service of the National Oceanic and Atmospheric Adiministration and its predecessor organizations have made annual surveys for statistics on the domestic production of industrial fishery products. The data collected include statistics on the production and value of each commodity. The value shown for the products constitutes the gross amount received by the producer at the production point; no deductions are made for commission or expenses.

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noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / NATIONAL MARINE FISHERIES SERVICE

## REVIEW

The value of industrial fishery products in the United States, American Samoa, and Puerto Rico in 1977 was $190.6 million–$5.8 million more than the $184.8 million in 1976. In terms of value, the leading producing States were Louisiana ($49.0 million), Maine ($32.7 million), Virginia ($27.7 million), and California ($24.6 million). These values are based on the selling price at the producing plants.

Fish meal and scrap. Domestic production, including shellfish meal, was 282,291 tons in 1977 valued at $97.2 million–27,403 tons less than the 309,694 tons in 1976, but $424,000 more than the value of $96.8 million in 1976. Menhaden meal (193,268 tons valued at $71.8 million in 1977) accounted for 68 percent of the total production and 74 percent of the value. Tuna meal declined by 831 tons to 39,228 tons in 1977, but increased by $1.7 million. Anchovy meal in 1977 was 18,871 tons--3,293 tons (15 percent) less than the 22,164 tons in 1976, but $394,000 more than the 1976 value. Meal from alewife, thread herring, and unclassified fish was 19,374 tons in 1977, compared with 19,816 tons produced in 1976. The 9,270 tons of shellfish meal valued at $1.1 million in 1977 was 1,414 tons and $44,000 less than the 1976 production. Meal from crabs and shrimp in 1977 was 5,745 and 927 tons, respectively, 1,041 and 271 tons less than the 6,772 tons and 1,198 tons produced in 1976. Mixed fish meal declined in 1977 by 116 tons, from the 2,714 tons produced in 1976.

Fish oil. The domestic production of fish oil was 133.2 million pounds valued at $28.2 million in 1977--71.4 million pounds and $2.9 million less than the 204.6 million pounds and $31.2 million in 1976. The production of all fish oils decreased in 1977, except for other marine animal oil, which increased 3.0 million pounds. Menhaden oil (116.1 million pounds) declined 70.3 million pounds compared with 1976. With a decline in the production of fish oils (other than liver), imports also declined from 20.9 million pounds in 1976 to 13.7 million pounds in 1977.

Fish solubles. Domestic production of fish solubles was 122,330 tons valued at $13.9 million in 1977, down 10,777 tons and $312,000 compared with 1976. The 87,390 tons of menhaden solubles contributed 71 percent of the total 122,330 tons produced in 1977, compared with 72 percent of the total in 1976.

Other industrial products. Domestic production of oyster shell products (grit and lime) were valued at $6.7 million in 1977 compared with $6.1 million in 1976. The value of the production of other industrial products was $44.4 million in 1977 compared with $36.4 million in 1976. These other industrial products included agar-agar, animal feeds and fish pellets, clam and crab shells (processed for food serving), Irish moss extracts, kelp products, shark leathers, liquid fertilizers, marine pearl shell buttons, pearl essence, and other products.

SUMMARY OF PRODUCTION, BY PRODUCTS, 1977

| Product | Plants | Unit | Quantity | Dollars |
|---|---|---|---|---|
| | Number | | Thousands | |
| Fish and shellfish meal | 85 | Tons | 282 | 97,239 |
| Fish body oils | 51 | Pounds | 133,182 | 28,239 |
| Fish solubles | 26 | Tons | 122 | 13,945 |
| Oyster shell grit and lime ("live and reef shells") | 5 | do | 264 | 6,708 |
| Miscellaneous industrial products | 39 | - | - | 44,441 |
| Total | (1) 123 | - | - | 190,572 |

(1) Exclusive of duplication.

VALUE OF PRODUCTION BY STATE AND PLANT COUNT, 1977

| State | Thousand dollars |
|---|---|
| Maine (7) | 32,688 |
| Massachusetts (3), and Rhode Island (1) | 4,347 |
| New York (2), and Pennsylvania (1) | 87 |
| New Jersey (4) | 6,075 |
| Maryland (4) | 1,832 |
| Virginia (9) | 27,677 |
| North Carolina (9) | 8,022 |
| Alabama (1), Georgia (2), and Texas (1) | 5,222 |
| Florida (3) | 612 |
| Mississippi (4) | 16,638 |
| Louisiana (25) | 48,991 |
| Alaska (3) | 743 |
| Washington (10) | 4,263 |
| Oregon (6) | 741 |
| California (15) | 24,541 |
| Iowa (1), Michigan (1), Minnesota (2), Utah (1), and Wisconsin (1) | 2,817 |
| American Samoa (2), Hawaii (1), and Puerto Rico (4) | 5,276 |
| Total (123) | 190,572 |

## PRODUCTION OF MARINE ANIMAL MEAL AND SCRAP, 1977

| Product | Atlantic and Gulf Coasts | | American Samoa, Pacific Coast, and Puerto Rico | | Total | |
|---|---|---|---|---|---|---|
| | Thousand tons | Thousand dollars | Thousand tons | Thousand dollars | Thousand tons | Thousand dollars |
| Dried scrap and meal: | | | | | | |
| Fish: | | | | | | |
| Anchovy | - | - | 19 | 6,474 | 19 | 6,474 |
| Herring, sea | (1) 2 | (1) 803 | - | - | 2 | 803 |
| Menhaden | 193 | 71,785 | - | - | 193 | 71,785 |
| Tuna and mackerel | - | - | 39 | 10,544 | 39 | 10,544 |
| Unclassified | 15 | 5,411 | 4 | 1,133 | 19 | 6,544 |
| Total | 210 | 77,999 | 62 | 18,151 | 272 | 96,150 |
| Shellfish: | | | | | | |
| Crab | 5 | 585 | 1 | 92 | 6 | 677 |
| Shrimp | (1) 1 | (1) 87 | - | - | 1 | 87 |
| Unclassified | - | - | 3 | 325 | 3 | 325 |
| Total | 6 | 672 | 4 | 417 | 10 | 1,089 |
| Grand total | 216 | 78,671 | 66 | 18,568 | 282 | 97,239 |

(1) Includes production on the Pacific Coast. (2) Includes production in the Great Lakes States and Mississippi River areas.

## PRODUCTION OF MARINE ANIMAL OIL, 1977

| Product | Atlantic and Gulf Coasts | | Pacific Coast and Puerto Rico | | Total | |
|---|---|---|---|---|---|---|
| | Thousand pounds | Thousand dollars | Thousand pounds | Thousand dollars | Thousand pounds | Thousand dollars |
| Fish oils: | | | | | | |
| Anchovy | - | - | 6,171 | 846 | 6,171 | 846 |
| Herring, sea | (1) 440 | (1) 96 | - | - | 440 | 96 |
| Menhaden | 116,149 | 25,132 | - | - | 116,149 | 25,132 |
| Tuna and mackerel | - | - | 3,807 | 395 | 3,807 | 395 |
| Unclassified | (2) 4,844 | (2) 1,536 | 1,771 | 234 | 6,615 | 1,770 |
| Total | 121,433 | 26,764 | 11,749 | 1,475 | 133,182 | 28,239 |

(1) Includes production on the Pacific Coast. (2) Includes production in the Great Lakes States, Mississippi River area, and a small production of liver oils.

## PRODUCTION OF FISH SOLUBLES, 1977

| Product, state, and number of plants | Thousand tons | Thousand dollars |
|---|---|---|
| Menhaden: | | |
| Florida (1), New Jersey (1), and Virginia (2) | 42 | 4,685 |
| North Carolina (3) | 10 | 135 |
| Louisiana (7) and Mississippi (2) | 35 | 4,986 |
| Total (16) | 87 | 9,806 |
| Unclassified: | | |
| California (6), Hawaii (1), Massachusetts (1), Oregon (1), and Virginia (1) | 35 | 4,139 |
| Grand total (25) | 122 | 13,945 |

## PRODUCTION OF MENHADEN PRODUCTS, 1977

| State and number of plants | Dried scrap and meal | | Oil | | Solubles | | Total |
|---|---|---|---|---|---|---|---|
| | Tons | Dollars | Pounds | Dollars | Pounds | Dollars | Dollars |
| | Thousands | | | | | | |
| Maine | 3 | 1,206 | 4,664 | 1,048 | - | - | 2,254 |
| Florida (1), New Jersey (1), and Virginia (2) | 63 | 22,140 | 25,391 | 4,860 | 42 | 4,685 | 31,685 |
| North Carolina (4) | 17 | 6,612 | 3,238 | 535 | 10 | 135 | 7,282 |
| Mississippi (3) | 26 | 10,065 | 21,380 | 4,966 | (1) | (1) | 15,031 |
| Louisiana (8) | 84 | 31,762 | 61,476 | 13,723 | 35 | 4,986 | 50,471 |
| Total (22) | 193 | 71,785 | 116,149 | 25,132 | 87 | 9,806 | 106,723 |

(1) Included with Louisiana.

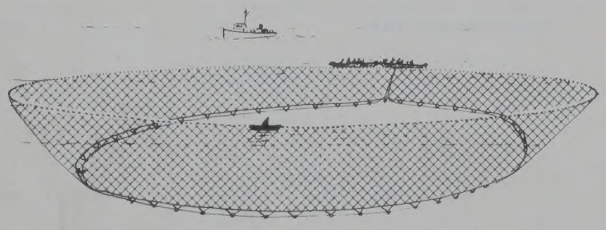
## PRODUCTION OF OYSTER SHELL PRODUCTS, 1977
("Live and reef shells")

| State and number of plants | Poultry grit | | Lime, burned and unburned | | Total | |
|---|---|---|---|---|---|---|
| | Tons | Dollars | Tons | Dollars | Tons | Dollars |
| | Thousands | | | | | |
| Alabama (1), Maryland (1), Oregon (1), Pennsylvania (1), and Texas (1) | 264 | 6,708 | (1) | (1) | 264 | 6,708 |

(1) The production of oyster shell lime has been included with poultry grit.

## PRODUCTION OF MISCELLANEOUS INDUSTRIAL FISHERY PRODUCTS, 1977

| Product | State and number of plants | Thousand dollars |
|---|---|---|
| Agar-agar | California (1) | |
| Animal feeds and fish pellets | California (1), Michigan (1), Minnesota (2), New York (1), Oregon (4), Rhode Island (1), Utah (1), Virginia (2), and Washington (6) | |
| Clam and crab shells (processed for food serving) | Florida (1), Mississippi (1), and North Carolina (1) | |
| Irish moss products | Maine (2) and Massachusetts (1) | |
| Kelp products | California (2) | 44,441 |
| Leather products (shark) | New Jersey (1) | |
| Liquid fertilizer | California (1) | |
| Marine pearl shell buttons | Maryland (1) and New Jersey (2) | |
| Pearl essence | Maine (3) | |
| Unclassified crab products and fish protein concentrate | Massachusetts (1), and Washington (1) | |



Menhaden purse seine

NUMBER OF PLANTS PRODUCING INDUSTRIAL FISHERY PRODUCTS, BY TYPE PRODUCT, 1977

| Product | Atlantic and Gulf Coasts (1) | Pacific Coast (2) | Total |
|---|---|---|---|
| | | -Number- | |
| Scrap and meal, dried: | | | |
| Alewife | 3 | - | 3 |
| Anchovy | - | 7 | 7 |
| Carp | 1 | - | 1 |
| Crab | 13 | 2 | 15 |
| Herring: | | | |
| Sea | 2 | 2 | 4 |
| Thread | 2 | - | 2 |
| Menhaden | 22 | - | 22 |
| Shrimp | 16 | 2 | 18 |
| Tuna and mackerel | - | 15 | 15 |
| Unclassified | 9 | 5 | 14 |
| Oil: | | | |
| Alewife | 3 | - | 3 |
| Anchovy | - | 7 | 7 |
| Carp | 1 | - | 1 |
| Herring: | | | |
| Sea | 1 | 2 | 3 |
| Thread | 2 | - | 2 |
| Menhaden | 22 | - | 22 |
| Tuna and mackerel | - | 8 | 8 |
| Unclassified: | | | |
| Liver | 1 | - | 1 |
| Body | 5 | 6 | 11 |
| Shell products: | | | |
| Clam shells processed for food serving | 1 | - | 1 |
| Crabs shells processed for food serving | 2 | - | 2 |
| Marine pearl shell buttons | 3 | - | 3 |
| Oyster shell: | | | |
| Crushed for poultry feed | 4 | 1 | 5 |
| Lime (burned and unburned) | 2 | - | 2 |
| Seaweed products: | | | |
| Agar-agar | - | 1 | 1 |
| Irish moss extracts | 3 | - | 3 |
| Kelp products | - | 2 | 2 |
| Miscellaneous: | | | |
| Animal feeds and fish pellets | 8 | 12 | 20 |
| Fish protein concentrate | 1 | - | 1 |
| Fish solubles | 17 | 8 | 25 |
| Liquid fertilizer | - | 1 | 1 |
| Pearl essence | 3 | - | 3 |
| Shark leather | 1 | - | 1 |
| Unclassified crab products | - | 1 | 1 |
| Total, exclusive of duplication | 82 | 41 | 123 |

(1) Includes firms in the Great Lakes and Mississippi River areas. (2) Includes Puerto Rico and American Samoa.

PRODUCTION OF INDUSTRIAL FISHERY PRODUCTS, 1965-1977

| Year | Menhaden, dried scrap and meal | | Herring meal | | Tuna and mackerel meal | |
|---|---|---|---|---|---|---|
| | Tons | Thousand dollars | Tons | Thousand dollars | Tons | Thousand dollars |
| 1965 | 175,959 | 25,869 | 12,932 | 2,006 | 25,399 | 3,032 |
| 1966 | 134,954 | 20,539 | 11,860 | 1,971 | 25,290 | 3,199 |
| 1967 | 119,135 | 15,265 | 9,492 | 1,328 | 25,487 | 2,758 |
| 1968 | 143,154 | 19,534 | 15,411 | 2,128 | 28,781 | 2,955 |
| 1969 | 159,493 | 26,960 | 6,563 | 1,045 | 26,870 | 3,239 |
| 1970 | 188,550 | 34,658 | 6,415 | 1,175 | 26,674 | 3,753 |
| 1971 | 220,996 | 34,953 | 5,189 | 860 | 29,287 | 3,706 |
| 1972 | 193,580 | 35,294 | 5,487 | 1,162 | 43,226 | 5,484 |
| 1973 | 188,786 | 84,893 | 4,457 | 1,978 | 43,635 | 13,243 |
| 1974 | 203,859 | 60,369 | 3,191 | 1,268 | 48,244 | 11,603 |
| 1975 | 191,443 | 45,993 | 3,581 | 1,074 | 37,209 | 6,384 |
| 1976 | 212,553 | 72,746 | 4,338 | 1,620 | 40,059 | 8,820 |
| 1977 | 193,268 | 71,785 | 2,294 | 803 | 39,228 | 10,544 |

| Year | Other, dried scrap and meal | | Total, scrap and meal | | Fish solubles and homogenized condensed fish | |
|---|---|---|---|---|---|---|
| | Tons | Thousand dollars | Tons | Thousand dollars | Tons | Thousand dollars |
| 1965 | 39,761 | 4,800 | 254,051 | 35,707 | 94,850 | 5,939 |
| 1966 | 51,717 | 6,566 | 223,821 | 32,276 | 83,441 | 5,160 |
| 1967 | 57,075 | 6,687 | 211,189 | 26,038 | 74,675 | 4,588 |
| 1968 | 47,790 | 5,644 | 235,136 | 30,261 | 71,833 | 3,707 |
| 1969 | 59,738 | 8,579 | 252,664 | 39,823 | 81,692 | 4,123 |
| 1970 | 47,558 | 6,768 | 269,197 | 46,353 | 94,968 | 4,946 |
| 1971 | 37,340 | 4,982 | 292,812 | 44,501 | 111,188 | 5,046 |
| 1972 | 43,213 | 6,349 | 285,506 | 48,289 | 134,395 | 5,728 |
| 1973 | 50,639 | 19,792 | 287,517 | 119,905 | 137,435 | 15,446 |
| 1974 | 45,420 | 11,140 | 300,714 | 84,380 | 137,259 | 11,730 |
| 1975 | 58,198 | 12,094 | 290,431 | 65,545 | 127,850 | 8,753 |
| 1976 | 52,744 | 13,629 | 309,694 | 96,815 | 133,107 | 14,257 |
| 1977 | 47,501 | 14,107 | 282,291 | 97,239 | 122,330 | 13,945 |

| Year | Menhaden oil | | Herring oil | | Tuna and mackerel oil | |
|---|---|---|---|---|---|---|
| | Thousand pounds | Thousand dollars | Thousand pounds | Thousand dollars | Thousand pounds | Thousand dollars |
| 1965 | 175,204 | 13,241 | 8,528 | 748 | 4,794 | 334 |
| 1966 | 144,198 | 10,982 | 7,882 | 585 | 4,111 | 303 |
| 1967 | 101,384 | 4,736 | 5,676 | 307 | 5,218 | 268 |
| 1968 | 152,020 | 6,247 | 9,533 | 376 | 4,549 | 163 |
| 1969 | 149,155 | 8,253 | 3,484 | 217 | 4,256 | 132 |
| 1970 | 186,283 | 16,833 | 5,437 | 328 | 3,534 | 168 |
| 1971 | 244,040 | 19,249 | 5,856 | 488 | 4,933 | 255 |
| 1972 | 166,956 | 11,563 | 5,064 | 481 | 5,030 | 272 |
| 1973 | 200,489 | 23,051 | 1,724 | 238 | 7,396 | 494 |
| 1974 | 217,045 | 46,060 | (1) | (1) | 6,819 | 810 |
| 1975 | 213,271 | 29,182 | 1,598 | 161 | 6,444 | 691 |
| 1976 | 186,400 | 28,910 | 2,075 | 356 | 6,340 | 554 |
| 1977 | 116,149 | 25,132 | 440 | 96 | 3,807 | 395 |

See footnotes at end of tables.

(Continued on next page)

**U.S. DEPARTMENT OF COMMERCE**
**National Oceanic and Atmospheric Administration**
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

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PRODUCTION OF INDUSTRIAL FISHERY PRODUCTS, 1965-1977 - Continued

| Year | Whale and sperm oil | | Other marine animal oil | | Total oil | |
|---|---|---|---|---|---|---|
| | Thousand pounds | Thousand dollars | Thousand pounds | Thousand dollars | Thousand pounds | Thousand dollars |
| 1965 | 2,667 | 169 | 4,247 | 360 | 195,440 | 14,852 |
| 1966 | 1,365 | 81 | 6,489 | 528 | 164,045 | 12,480 |
| 1967 | 2,483 | 147 | 7,637 | 653 | 122,398 | 6,112 |
| 1968 | 2,394 | 116 | 5,576 | 425 | 174,072 | 7,327 |
| 1969 | 1,736 | 104 | 11,154 | 620 | 169,785 | 9,326 |
| 1970 | 680 | 46 | 10,150 | 809 | 206,084 | 18,185 |
| 1971 | 418 | 40 | 10,203 | 799 | 265,450 | 20,831 |
| 1972 | - | - | 11,395 | 801 | 188,445 | 13,117 |
| 1973 | - | - | 15,025 | 1,781 | 224,634 | 25,563 |
| 1974 | - | - | 14,116 | 2,345 | 237,980 | 49,216 |
| 1975 | - | - | 24,340 | 2,569 | 245,653 | 32,603 |
| 1976 | - | - | 9,766 | 1,336 | 204,581 | 31,156 |
| 1977 | - | - | 12,786 | 2,616 | 133,182 | 28,239 |

| Year | Oyster and marine clam shell lime and grit | Freshwater mussel shell products | Marine pearl shell buttons | Other industrial products | Grand total |
|---|---|---|---|---|---|
| | Tons | Thousand dollars | | | |
| 1965 | 349,528 | 4,558 | (2) 117 | 901 | 20,756 | 82,830 |
| 1966 | 334,212 | 4,315 | (3) | 816 | 17,925 | 72,972 |
| 1967 | 311,367 | 4,144 | (3) | 789 | 19,356 | 61,027 |
| 1968 | 239,798 | 3,572 | (3) | 1,078 | 24,182 | 70,127 |
| 1969 | 207,332 | 3,329 | (3) | 841 | 25,562 | 83,005 |
| 1970 | 204,037 | 3,409 | (4) | (4) | 26,646 | 99,540 |
| 1971 | 228,605 | 4,128 | (4) | (4) | 32,046 | 106,551 |
| 1972 | 221,711 | 4,210 | (4) | (4) | 84,639 | 155,982 |
| 1973 | 207,922 | 4,015 | - | (4) | 37,898 | 202,828 |
| 1974 | 207,576 | 4,651 | - | (4) | 48,858 | 198,834 |
| 1975 | 272,852 | 5,847 | - | (4) | 49,550 | 162,297 |
| 1976 | 268,013 | 6,085 | - | (4) | 36,437 | 184,750 |
| 1977 | 263,652 | 6,708 | - | (4) | 44,441 | 190,572 |

(1) Included with other oils. (2) Includes the value of pearl shell novelties. (3) Included with marine pearl shell buttons. (4) Included with other industrial products.

Note:--Totals are correct. Data may not add due to rounding.